WHAT IS CLAIMED IS:

1. A DNA coding for a polypeptide of the following (A) or (B):

(A) a polypeptide which comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 19, SEQ ID NO: 23, SEQ ID NO: 25 and SEQ ID NO:48; or

(B) a polypeptide which comprises an amino acid sequence including deletion, substitution or insertion of one or several amino acids in the amino acid sequence as defined in (A), and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.

2. The DNA according to claim 1, which is a DNA of the following (a) or (b):

(a) a DNA which comprises a nucleotide sequence selected from the group consisting of the nucleotide sequence of nucleotides 1 to 444 of SEQ ID NO: 18, the nucleotide sequence of nucleotides 630 to 1358 of SEQ ID NO: 22, nucleotides 132 to 506 of SEQ ID NO: 24, and the nucleotide sequence of nucleotides 18 to 746 of SEQ ID NO: 47; or

(b) a DNA which is hybridizable with a DNA comprising the nucleotide sequence as defined in (a) or a prove prepared from said DNA, under the stringent condition, and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic

progenitor cells.

3. The DNA according to claim 2, the stringent condition is 6 x SSC、5 x Denhardt, 0.5% SDS and 68°C (SSC: 3 M NaCl, 0.3 M sodium citrate; 50 x Denhardt: 1% BSA、1% polyvinyl pyrrolidone, 1% Ficoll 400), or 6 x SSC, 5 x Denhardt, 0.5% SDS, 50% formamide and 42°C.

4. A expression vector which comprises the DNA of any one of claims 1 to 3 in such a manner that the DNA can be expressed.

5. A cell into which the DNA of any one of claims 1 to 3 is introduced in such a manner that the DNA can be expressed.

6. A polypeptide which is an expression product of the DNA of any one of claims 1 to 3, the polypeptide having an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.

7. The polypeptide according to claim 6, which comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 19, SEQ ID NO: 23, SEQ ID NO: 25 and SEQ ID NO: 48, or an amino acid sequence including deletion, substitution or insertion of one or several amino acids in the amino acid sequence.

8. The polypeptide according to claim 6 or 7, which is modified with one or more modifying agents selected from the group consisting of polyethylene glycol (PEG), dextran, poly(N-vinyl-pyrrolidone),

polypropylene glycol homopoymer, copolymer of polypropylene oxide/ethylene oxide, polyoxyethylated polyol and polyvinyl alcohol.

9. An monoclonal antibody which binds to the polypeptide of any one of claims 6 to 8.

10. A method for supporting proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells, comprising the step of co-culturing stromal cells in which a DNA coding for a polypeptide of the following (A) or (B) is expressed, with hematopoietic stem cells or progenitor cells,

(A) a polypeptide which comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29, and SEQ ID NO: 48; or

(B) a polypeptide which comprises an amino acid sequence including deletion, substitution or insertion of one or several amino acids in the amino acid sequence as defined in (A), and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.

11. The method according to claim 10, wherein the DNA is a DNA of the following (a) or (b):

(a) a DNA which comprises a nucleotide sequence selected from the group consisting of the nucleotide

sequence of nucleotides 1 to 1671 of SEQ ID NO: 8, the nucleotide sequence of nucleotides 1 to 1674 of SEQ ID NO: 10, the nucleotide sequence of nucleotides 1 to 366 of SEQ ID NO: 12, the nucleotide sequence of nucleotides 84 to 1121 of SEQ ID NO: 14, the nucleotide sequence of nucleotides 1 to 1035 of SEQ ID NO: 16, the nucleotide sequence of nucleotides 1 to 444 of SEQ ID NO: 18, the nucleotide sequence of nucleotides 1 to 444 of SEQ ID NO: 20, the nucleotide sequence of nucleotides 630 to 1358 of SEQ ID NO: 22, the nucleotide sequence of nucleotides 132 to 506 of SEQ ID NO: 24, the nucleotide sequence of nucleotides 1 to 2487 of SEQ ID NO: 26, the nucleotide sequence of nucleotides 1 to 2496 of SEQ ID NO: 28, and nucleotides 18 to 746 of SEQ ID NO: 47; or

(b) a DNA which is hybridizable with a DNA comprising the nucleotide sequence as defined in (a) or a prove prepared from said DNA, under the stringent condition, and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.

12. A method for supporting proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells, comprising the step of culturing hematopoietic stem cells or progenitor cells in the presence of a polypeptide of the following (A) or (B), said polypeptide having an activity to support proliferation or survival of hematopoietic stem cells or

hematopoietic progenitor cells when the hematopoietic stem cells or hematopoietic progenitor cells are cultured in the presence of the polypeptide,

(A) a polypeptide which comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29, and SEQ ID NO: 48; or

(B) a polypeptide which comprises an amino acid sequence including deletion, substitution or insertion of one or several amino acids in the amino acid sequence as defined in (A), and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.

13. A pharmaceutical composition having an effect to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells, which comprises an effective amount of a polypeptide of the following (A) or (B), said polypeptide having an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells when hematopoietic stem cells or hematopoietic progenitor cells are cultured in the presence of the polypeptide,

(A) a polypeptide which comprises an amino acid sequence selected from the group consisting of SEQ ID

NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, and SEQ ID NO: 29, SEQ ID NO: 48; or

(B) a polypeptide which comprises an amino acid sequence including deletion, substitution or insertion of one or several amino acids in the amino acid sequence as defined in (A), and which has an activity to support proliferation or survival of hematopoietic stem cells or hematopoietic progenitor cells.